

Operant conditioning of dogs (*Canis familiaris*) for identification of humans using scent lineup

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Abstarc :

Training of dogs to distinguish individual human scent has no well-established scientific basis. The aim of the study was to evaluate the progress made over three consecutive training phases and to compare the training results with those of the working phase. Six naive German Shepherd dogs (4 males and 2 females) were trained to match one target human scent, placed randomly in a lineup of five other human scents, with that sniffed directly before the trial. The dogs required on average 15.3, 23.0 and 0.3 trials with commands to spontaneously indicate the target scent in training phase I (food odour amidst blank samples), in phase II (human scent amidst blanks) and in phase III (individual human scent amidst other humans' scents), respectively. The differences among dogs in their trainability, as expressed by the number of trials with commands were significant in phases I and II. The mean percentage of false alarms (FA) and misses (MI) increased significantly in consecutive training phases. The dogs differed significantly in percentage of FA and MI in phases II and III. Non-significant rank correlation coefficients between FAs in consecutive training phases as well as between MIs indicate that it is difficult to predict future performance of a dog based upon its performance in the earlier training phases. All dogs easily learned to perform operant conditioning responses in the scent lineup, but displayed no significant improvement of the detection accuracy within particular training phases and during the working phase.

Key Word :

human scent, identification accuracy, operant conditioning, sniffer dogs training

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